



OCT 17 2007 Practitioner's Docket No. U 014901-6

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: TSUYOSHI SANO, et al

Serial No.: 10/717,315

Group No.: 1714

Filed: November 19, 2003

Examiner : Callie E. Shosho

For: BLACK INK COMPOSITION, INK SET, RECORDING METHOD AND RECORDED MATTER PROCESS FOR MANUFACTURE IT

Commissioner for Patents

P. O. Box 1450

Alexandria, VA 22313-1450

NOTICE OF APPEAL FROM THE PRIMARY EXAMINER
TO THE BOARD OF PATENT APPEALS AND INTERFERENCES
(37 C.F.R. 1.191)

NOTE: An appeal may be based on one rejection in a prior application and one rejection in a continuing application. Notice of Oct. 10, 1997, 62 F.R. 53131, at 53167.

NOTE: There is no requirement for a notice of appeal to: (1) be signed (see, 37 C.F.R. 41.31(3)(b)) or (2) identify the appealed claims. Notice of Oct. 10, 1997, 62 F.R. 53131, at 53167.

[x] Applicant hereby appeals to the Board from the decision of the Primary Examiner, mailed July 13, 2007, rejecting claims 1 - 19 for at least the second time.

NOTE: In an ex parte reexamination filed after November 29, 1999, an appeal may be taken only after the final rejection of claims. MPEP § 2273 (8th Edition, Rev. 2)

[] Patent Owner hereby appeals to the Board from the decision of the Examiner, mailed _____, finally rejecting claims _____.

The item(s) checked below are appropriate:

CERTIFICATE OF MAILING/TRANSMISSION (37 C.F.R. 1.8(a))

I hereby certify that, on the date shown below, this correspondence is being:

MAILING

deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450.

FACSIMILE

transmitted by facsimile to the Patent and Trademark Office, to (571)-273-8300

Signature

CLIFFORD J. MASS

(type or print name of person certifying)

Date: October 15, 2007

10/18/2007 TNGUYEN2 00000019 10717315

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510.00 OP

1. A Pre-Appeal Brief Request for Review

[X] is attached as required therefor
[] is not attached

2. STATUS OF APPLICANT

This application is qualified as

[] a small entity.
[X] other than a small entity.

3. FEE FOR FILING NOTICE OF APPEAL

The fee for filing the Notice of Appeal is:

[] a small entity	\$255.00
[X] other than a small entity	\$510.00

Notice of Appeal fee due \$ 510

4. EXTENSION OF TERM

NOTE: 37 C.F.R. § 1.704(b) ". . . an applicant shall be deemed to have failed to engage in reasonable efforts to conclude processing or examination of an application for the cumulative total of any periods of time in excess of three months that are taken to reply to any notice or action by the Office making any rejection, objection, argument, or other request, measuring such three-month period from the date the notice or action was mailed or given to the applicant, in which case the period of adjustment set forth in § 1.703 shall be reduced by the number of days, if any beginning on the day after the date that is three months after the date of mailing or transmission of the Office communication notifying the applicant of the rejection, objection, argument, or other request and ending on the date the reply was filed. The period, or shortened statutory period, for reply that is set in the Office action or notice has no effect on the three-month period set forth in this paragraph."

NOTE: The time periods set forth in 37 C.F.R. 41.31 are subject to the provision of § 1.136 for patent applications. 37 C.F.R. 41.31(d). (But see 37 C.F.R. 1.645 for extension of time in interference proceedings and 37 C.F.R. 1.550(c) for extension of time in reexamination proceedings).

(complete (a) or (b), as applicable)

The proceedings herein are for a patent application and the provisions of 37 C.F.R. 1.136 apply.

(a) [] Applicant petitions for an extension of time under 37 C.F.R. 1.136 (fees: 37 C.F.R. 1.17(a)(1)-(4)) for the total number of months checked below:

Extension (months)	Fee for other than <u>small entity</u>	Fee for <u>small entity</u>
<input type="checkbox"/> one month	\$ 120.00	\$ 60.00
<input type="checkbox"/> two months	\$ 460.00	\$ 230.00
<input type="checkbox"/> three months	\$ 1,050.00	\$ 525.00
<input type="checkbox"/> four months	\$ 1,630.00	\$ 815.00
	Fee \$ _____	

If an additional extension of time is required, please consider this a petition therefor.

(check and complete the next item, if applicable)

[] An extension for _____ months has already been secured, and the fee paid therefor of \$ _____ is deducted from the total fee due for the total months of extension now requested.

Extension fee due with this request \$ _____

or

(b) [X] Applicant believes that no extension of term is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

5. TOTAL FEE DUE

The total fee due is:

Notice of Appeal fee \$ 510

Extension fee (if any) \$ _____

TOTAL FEE DUE \$ 510

6. FEE PAYMENT

[X] Attached is a check in the sum of \$ 510.
[] Charge Account No. _____ the sum of \$ _____.
A duplicate of this transmittal is attached.

7. FEE DEFICIENCY OR OVERPAYMENT

NOTE: If there is a fee deficiency and there is no authorization to charge an account, additional fees are necessary to cover the additional time consumed in making up the original deficiency. If the maximum, six-month period has expired before the deficiency is noted and corrected, the application is held abandoned. In those instances where authorization to charge is included, processing delays are encountered in resuming the papers to the PTO Finance Branch in order to apply these charges prior to action on the cases. Authorization to charge the deposit account for any fee deficiency should be checked. See the Notice of April 7, 1986, 1065 O.G 31-33.

If any additional extension and/or fee is required, this is a request therefor and to charge Account No. 12-0425.

AND/OR

If any additional fee for claims is required, charge Account No. 12-0425.

AND/OR

Refund any overpayment to Account No. 12-0425.

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SIGNATURE OF PRACTITIONER

CLIFFORD J. MASS

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ARGUMENT IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW

Applicants provide the following reasons in support of their request for review of the final rejection of claims 1 - 19.

1. The Claimed Invention

The claimed invention has been developed to solve the problem presented by “golden gloss”, namely: when a printed image obtained by recording with a black ink composition having a low carbon black concentration reflects the light of a fluorescent lamp or the outside light, the reflected light glistens in gold (see specification at, e.g., page 6, first paragraph). The inventors surprisingly found that, with ink compositions having such low carbon black concentrations (less than 0.4 wt%), the problem could be solved by including in the ink compositions a fine particle emulsion so long as the solid content of the fine particle emulsion is 20 times or more the content of the carbon black.

On the basis of Applicants’ findings, the present claims recite two (2) variables which are result-effective for controlling golden gloss: (a) a content of carbon black in the black ink composition of less than 0.4 wt%; and (b) a ratio of solid content of fine particle emulsion to content of carbon black of 20 times or more. With respect to (a), as discussed in the specification at page 13, line 1-page 14, line 3 with reference to Fig. 1 of the drawing, the golden gloss phenomenon occurs mainly in a region recorded with a light black ink composition wherein the carbon black is present in an amount of less than 0.4 wt%. With

respect to (b), as discussed in the specification at, for example, page 16, line 6-page 17, line 15 and as shown in the Examples and Comparative Examples in the specification and in the Declaration under 37 CFR 1.132 filed 3 July 2007, to solve the problem of golden gloss it is critical to include in the black ink a fine particle emulsion having a solid content of 20 times or more of the content of the carbon black.

The description in the specification and the evidence of record show that the claimed combination of components in the recited amounts are not merely a combining of known elements to yield predictable results. Rather, the recited variables are result-effective in achieving a surprising and unpredictable result, namely the restraint of golden gloss.

2. The Prior Art

A. Nakamura et al

Nakamura is directed to an ink comprising (i) a pigment, (ii) a resin dispersant, and (iii) a thermoplastic resin emulsion, wherein only the weight ratio of (i) to (ii) is described. There is nothing in the text of Nakamura that shows or suggests **any** weight ratio of (i) to (iii), i.e. a ratio of the solid content of the fine particles relative to the content of the carbon black. The only ratio defined in Nakamura is the former one. Nakamura cannot be considered to show or suggest the recited weight ratio and, *a fortiori*, cannot show or suggest the result-effective nature thereof. Indeed, Nakamura addresses the problems of storage stability, print quality (bleeding) and jetting stability, and there is nothing to show or suggest that the ratio (i) to (iii) is result-effective for solving these problems.

B. Yatake

Yatake is directed to an ink set comprising light color inks of a plurality of colors and dark color inks of a plurality of colors, wherein the light color inks contain a fine polymer particle (see, for example, Claim 1). Yatake generally discloses the pigment content in the light inks as being “from 0.01 to 10 wt%, preferably from 0.1 to 5 wt%” (col. 7, lines 53-55) and the content of the fine polymer particles as being “0.5 to 10 wt%, preferably 2.5 to 8 wt% (col. 4, lines 18-19). As with Nakamura, Yatake is also silent about the solid content in connection with the content of the fine polymer particles. Yatake *a fortiori* also does not show or suggest the result-effective nature of the claimed variables, i.e., maintaining the solid

content of the fine particle emulsion at 20 or more times the content of carbon black with the content of carbon black being less than 0.4 wt %.

C. The Secondary References

Neither of the secondary references cited by the Examiner, EP 1219689 and GB 2370580, has been cited to show or suggest the claimed ratio of the solid content of fine particles of an emulsion relative to the content of carbon black or the result-effective nature of the claimed variables. Accordingly, neither can supplement the deficiencies in the cited primary references nor provide any motivation or reason to modify the primary references in respect of the claim limitations discussed herein.

3. Clear Error in Rejections Under 35 USC 103(a)

The claims stand rejected under 35 USC 103(a) as allegedly being unpatentable over Nakamura, et al either alone or in combination with EP 1219689, or as allegedly being unpatentable over Yatake either alone or in combination with EP 1219689 or GB 2370580.

The cited references do not show the following claim limitations: (a) the recited ratio of the solid content of the fine particle emulsion to the content of the carbon black; or (b) the result effective nature of the recited ratio, either alone or in conjunction with the recited content of carbon black of less than 0.4 wt%. Moreover, as next discussed, the rejections contain no articulated reason with rational underpinning to support a legal conclusion of nonobviousness with respect to these claim limitations.

A. The References Do Not Show The Claimed Ratio

The Examiner acknowledges that the cited primary references do not “explicitly” disclose a ratio of solid content of fine particle emulsion to content of carbon black, but apparently considers that the primary references “implicitly” disclose a solid content of fine particle emulsion to carbon black ratio within the claimed range. In so doing, the Examiner appears to conclude that a comparison may be made by taking into account the potential ratio ranges derivable, by calculation, from the general disclosure of the cited references (see Official Action of 13 July 2007 at page 10). As next discussed, this is respectfully not a rational basis upon which to support a legal conclusion of obviousness.

With this analysis, the Examiner is respectfully reading into the reference a range of ratios that is not there. The Examiner is speculating what the **outer limits** of a range could

be based upon the described ranges of the individual components, but there is nothing in the text of the references that describes any actual range of ratios within such possible outer limits. Thus, Nakamura discloses the content of the pigment as being “preferably from 0.1 to 10% by weight, more preferably from 0.5 to 5% by weight” (at the bottom in col. 3) and the content of the thermoplastic resin component as being “preferably from 0.2 to 20% by weight, more preferably from 7 to 20% by weight” (col. 7, lines 7-8). Nakamura is silent about the solid content in connection with the content of the thermoplastic resin component, and is silent about any ratio of resin to carbon black. Similarly, Yatake is silent about any ratio of resin to carbon black.

In short, the general disclosures of the cited references do not teach any ratio of solid content of fine particle emulsion to carbon black as claimed. Accordingly, although the Examiner is correct that one must look to the whole reference for what it teaches, including the general disclosure (Official Action of 13 July 2007 at pages 5 and 6), the general disclosures of the cited references do not provide a rational basis upon which one of skill in the art would conclude that the claimed ratio is present. With respect to the reference examples, Applicants have shown that the examples in the primary references do not show or suggest the claimed ratio. See Amendment filed 13 April 2007 at paragraph bridging pages 6-7 (Nakamura examples) and first full paragraph on page 8. Indeed, the Examiner has acknowledged that the reference examples do not show the claimed ratio. See Official Action of 13 July at page 5 (Nakamura) and page 6 (Yatake) respectively.

B. The References Do Not Show the Result-Effective Nature of the Claimed Variables

The Examiner has acknowledged that neither of the primary references, Nakamura et al., or Yatake, explicitly discloses the ratio of solid content of fine particle emulsion to content of carbon black as presently claimed. The Examiner nevertheless maintains that both references allegedly recognize that each of the pigment and resin individually is a result effective variable and, based upon this, asserts that **the ratio** of solid content of fine particle emulsion to content of carbon black is thus also recognized as a result effective variable.

Applicants respectfully submit that this is a mere conclusory statement that is not supported by articulated reasoning with rational underpinning. Assuming that each of the references teaches the result effective nature of each of the variables individually, it does **not**

follow that **the ratio** of the variables is result-effective. Thus, although Nakamura may teach that each of the variables individually should be optimized to improve, for example, storage stability, print quality or jetting stability of the ink composition described therein, this does not mean that a particular **ratio** of these variables would be desirable for improving such properties.

The controlling question in determining whether the prior art teaches the result-effective nature of the claimed ratio is whether one of skill in the art would recognize that any desirable property of an ink is a function of the ratio of the solid content of fine particle emulsion to the content of the carbon black when the carbon black is present in the ink in a concentration of less than 0.4wt%. See *In re Antonie*, 195 USPQ 6, 8 (CCPA 1977).

Recognition of this functionality is essential to the obviousness of conducting experiments to determine if the performance of an ink could be improved by varying the respective amounts of the carbon black and the solid content of the fine particle emulsion relative to one another. In the absence of anything in the cited references to show or suggest such recognition, there is respectfully no rationale underpinning to support the legal conclusion of obviousness for the claimed ink composition with the recited ratio.

4. Conclusion

In view of the above, Applicants respectfully submit that the USPTO has not met its burden of providing articulated reasoning with rational underpinning to support the legal conclusion of obviousness for the invention as defined in the claims of record. See KSR International Co. V. Teleflex Inc., 550 U.S. __, 82 USPQ2d, 1385, 1396 (2007).

Accordingly, Applicants respectfully submit that this application should be allowed on the existing claims.

Respectfully submitted,

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